RUMBLE STRIP RESPONSIVE SYSTEMS

CROSS-REFERENCE TO RELATED APPLICATIONS

This application relates to a co-pending U.S. Application Ser. No. 10/811,149 ~~under Attorney Docket No. 032915-0154~~ by Hiroshi Kawazoe and Hiroshi Tsuda, entitled Rumble Strip Responsive Systems filed concurrently herewith, the contents of which are incorporated herein in their entirety.

BACKGROUND OF THE INVENTION

[0001] Vehicle road departure is the cause of about 40% of all traffic fatalities in the United States. Road departures include both a vehicle driving off a road or off the shoulder of the road, and a vehicle crossing lanes into an oncoming lane on an undivided road. Inattentive driving and/or driving while drowsy tends to lead to road departures. In an effort to combat this, transportation authorities have begun to place rumble strips into roads. Rumble strips are bumps or indentations in the surface of a road such that when a vehicle's tire drives over a rumble strip, noise and/or vibration is generated to make the driver aware that he or she is driving off the road. In some cases, it may be desirable to enhance the noise/vibration resulting from simple contact with the rumble strip to alert the driver that he or she is driving off the road. Still further, rumble strips of varying locations and varying patterns and shapes are used based on where the rumble strip is located in respect to the road. For example, a different type of rumble strip may be utilized to separate oncoming lanes as compared to the type of rumble strips that are used to line the sides of roads. In this regard, the present inventors have determined that there is a way to utilize information which may be obtained from rumble strip sensors to convey information to the driver of the vehicle.

SUMMARY OF THE INVENTION